Milford City

Transportation Master Plan

DRAFT REPORT
February 7-8, 2005
Prepared By
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Milford City

Transportation Master Plan

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Robert Thieme
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City Manager …… Nedra Kennedy

City Engineer……..…..… April McKeon

Public Works Foreman ……. Tom Bradshaw

Zoning Administrator / Treasurer ……. Arden Fowles

City Recorder …… Monica Seifers

Street Supervisor …….. Tom Bradshaw

Planning & Zoning Chair…….. Cindy Pearson

Airport Manager ……Virginia Jones

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* If available for this study

1. Introduction

1.1. Background

Milford is located in a broad valley a few miles east of the geographical center of Beaver County. Originally, Milford was nothing more than a few shacks built on the hills near mines under excavation. Many of the miners who first came to Milford left within a few years after trying their fortune, but others came to stay. Arvin Stoddard was the first settler of the area, claiming 160 acres of land in 1880, building the first house in the area, and planting the first trees. During this same time, prospectors were searching the hills to the west and southwest for lead, silver, and gold. A Welsh smelterman, John D. Williams, came to Milford in 1880. He eventually built a smelter on land adjoining the Stoddard claim. Some contemporaries described Milford as a "perfect mudhole," or the "perfection of desolation."

Cattle-raising was also important in Milford's development. In the early 1870s three brothers settled at Pine Grove in Pine Valley west of Milford and established a cattle ranch. Within a few years several cattle companies had stock grazing in the land surrounding Milford. B.F. Saunders of Salt Lake City owned Utah's largest cattle herd--the Pike Springs Ranch--and he made Milford his shipping point. Cattle grazing was possible on nearby public domain land year round. Meadow grass covered the Beaver and Milford valleys from Hay Springs to Black Rock and supported as many as 20,000 head of cattle and 5,000 head of horses.

During the 1880s Milford became the railroad terminal for the Southern Utah Line, and it was particularly important as a loading place for the cattle of southern Utah. The railroad also enhanced Milford's importance as a supply station and the shipping center for local mines; it also facilitated trade with regional markets. Milford became the terminus for freighting activities for a region that included southern Utah, southern Nevada, and northern Arizona.

The railroad attempted three different times to extend rails from Milford to California. In 1881 work was begun on the roadbed but was quickly abandoned. In 1890 a second attempt was cut short by the national depression. The third attempt, in 1898, was successful and resulted in a line to Caliente, Nevada, by 1901. Milford was a valuable division terminal because of its excellent location and water facilities.

At the turn of the century, Milford had a population of 279, and in 1903 these inhabitants petitioned the county commission for incorporation. This facilitated both the codification of local ordinances and the unified planning for growth. Milford's Main Street was characterized by its simple frame architecture typical of mining towns. Saloons, boarding houses, and mercantile outfits lined both sides of the street. As might be expected, the town was plagued by fire and many structures burned to the ground from time to time.

In an article published in the Deseret News on 8 November 1914, Joseph Hickman claimed that "Milford has been Utah's most thorough representative of all types of frontier life." This statement describes the diverse nature of Milford's social, cultural, and economic life. Established first to service local mines, it quickly became an agricultural and stock-raising center of significance. This diversification is what allowed Milford to survive the closure of the mines, local smelters, and the slow-down of the mining industry.

Since 1950, when Milford's population was at its highest number--1,673 residents--the number of residents has declined steadily--to 1,106 in 1990. Still, the community has a high school, library, and several churches. Circle Four Farms and the Union Pacific Railroad are the community's largest employers.

This information was provided from www.onlineutah.com, in an article written by Martha Sonntag Bradley

1.2. Study Need

The City of Milford has seen a 31.1% population increase within the last decade after an (14.4%) population decrease the decade before. From 1960 to 2000, the population has decreased (1.4%)**.** The City of Milford has recently shown an increase in population. A well-established transportation plan is needed to provide direction for continual maintenance and improvements to Milford City’s transportation system.

Milford City has an adopted a General Plan. The Milford City General Plan briefly describes the transportation needs of this area**.** With the aging infrastructure of the transportation system and the need for system improvements, a more extensive transportation plan is necessary for Milford City and the surrounding area.

Some of the major transportation issues around the State are as follows:

- Safety
- Railroad crossings
- Trails (bicycle, pedestrian, & OHV)
- Signals
- City interchange aesthetics
- Connectivity of roadways
- Property access
- Truck traffic
- Alternate routes
- Speed limits

Milford City recognizes the importance of building and maintaining safe roadways, not only for the auto traffic but also for pedestrians and bicyclists.

1.3. Study Purpose

The purpose of this study is to assist in the development of a transportation master plan for Milford City. This plan could be adopted by Milford City as a companion document to the city's General Plan**.** With the transportation master plan in place the city can qualify for grants from the State Quality Growth Commission.

The primary objective of the study is to establish a solid transportation master plan to guide future developments and roadway expenditures. The plan includes two major components:

- Short-range action plan
- Long-range transportation plan

Short-range improvements focus on specific projects to improve deficiencies in the existing transportation system. The long-range plan will identify those projects that require significant advance planning and funding to implement and are needed to accommodate future traffic demand within the study area.

1.4. Study Area

The study area includes Milford City, and land adjacent to it that is in Beaver County. A general location map is shown in Figure 1-1. A more detailed map of the study area and city limits is shown in Figure 1-2. The study area was developed by Milford City and approved by the Milford City Transportation Master Plan Technical Advisory Committee.

The roadway network within the study area includes SR-21, and SR-257. Each of these roadways provides a vital function to Milford City proper and also access to adjacent municipalities. These roadways along with the local road network are shown in Figure 1-2.

1.5. Study Process

The study, which began in February 2005, is proceeding as a cooperative effort between Milford City, UDOT, and local community members. It is being conducted under the guidance of Milford City Officials. The following individuals participated in the initial meetings to provide input used to create this document. This group listed below will be referred to as the Technical Advisory Committee or "TAC" for this document.

Monica Seifers	**City Recorder**
Nedra Kennedy	**City Manager**
Janet Davis	**General Manager, Oak Tree Inn**
Bryan Sherwood	**City Council**
Virginia Jones	**Airport Manager**
Terry Wiseman	**UDOT Maintenance**
Ree Schena	**UDOT Area Supervisor**
Arden Fowles	**City Treasurer**
Eugene H. Mayer	**Mayor**
George Schaidt	**Retired**
April McKeon	**City Engineer**
Tom Bradshaw	**City Public Works Foreman**
Rob Adams	**Beaver Co. Economic Development**
Richard Jefferson	**Citizen**
David A. Symond	**Lions club**
Donald Willden	**Planning Commission**
Troy Netto	**City Council**
Carl Maples	**Circle Four Farm**
Bob Thieme	**Circle Four Farm**
Mary Schaidt	**Citizen**

The study process for the Milford City Transportation Master Plan consist of three basic parts: (1) inventory and analyze existing conditions, (2) project future conditions, and (3) development of a transportation master plan (TMP). This process involves the participation of the TAC for guidance, review, evaluation and recommendations in developing the TMP to include development of future projects for the identified study area.

The TAC will evaluate each part of the study process. Their comments will be incorporated into the study's draft final report. The remainder of the draft final report will focus on the recommendation and implementation portion of the transportation plan program. Transportation projects that will be recommended for the short-term and long-range needs will be developed based on the TAC's recommendations and concurrence.

The study process allows for the solicitation of input from the public at two TAC workshops. This public participation element is included in the study process to ensure that any decisions made regarding this study are acceptable to the community.

The first TAC workshop will provide an inventory and analysis of existing conditions and identify needed transportation improvements. The second TAC workshop will focus on prioritizing projects, estimating costs, and discussion of the funding processes.

The TAC is expected to recommend those comments that are to be incorporated into the report and applicable to the goals of this study. The draft final report and the final report will be submitted to the City for review and comments.

Upon local review of the draft report, UDOT will prepare appropriate changes and submit the final report to the City for approval. The final report will describe the study process, findings and conclusions, and will document the analysis of the recommended transportation system projects and improvements.

Figure 1-1: Milford Study Area Location

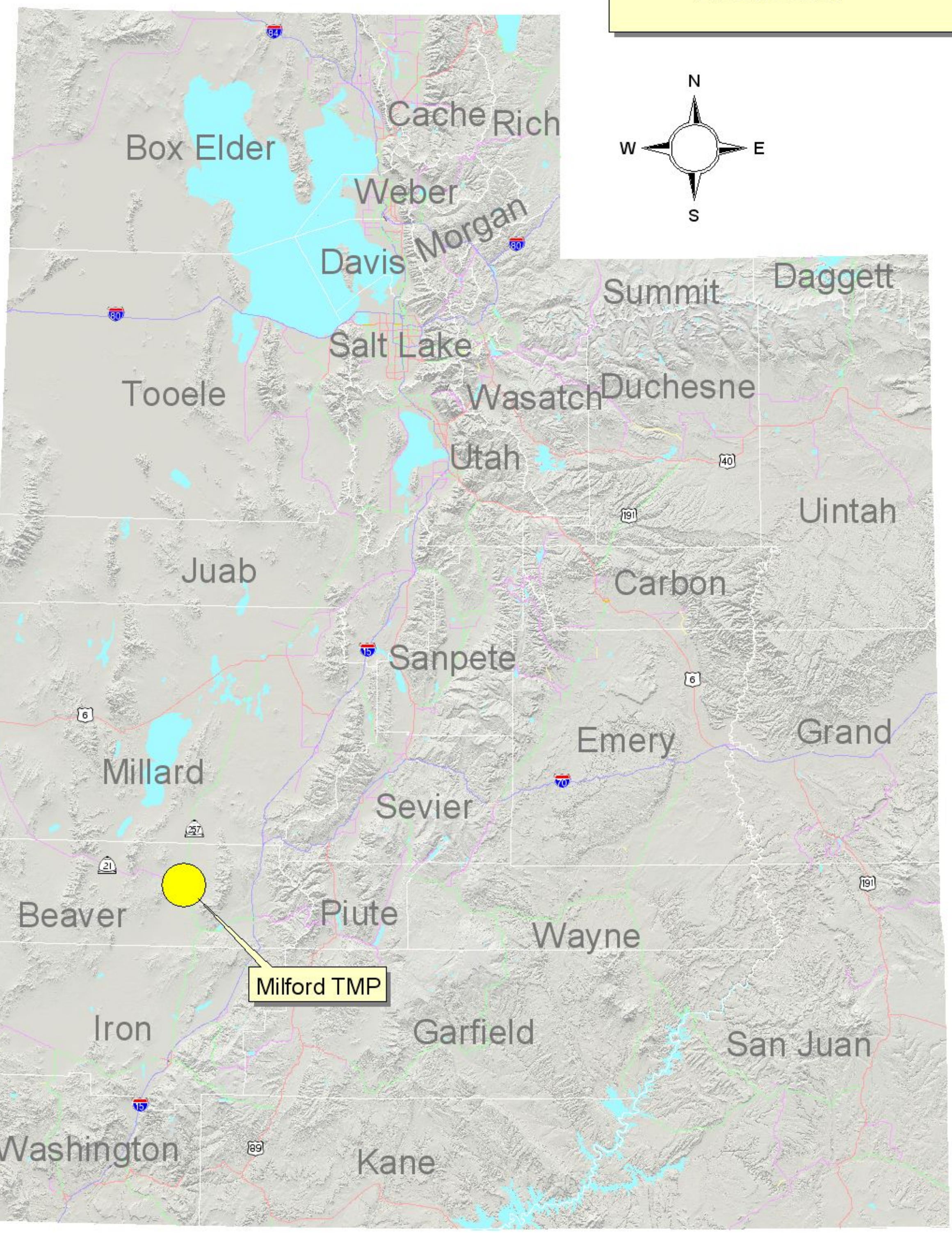
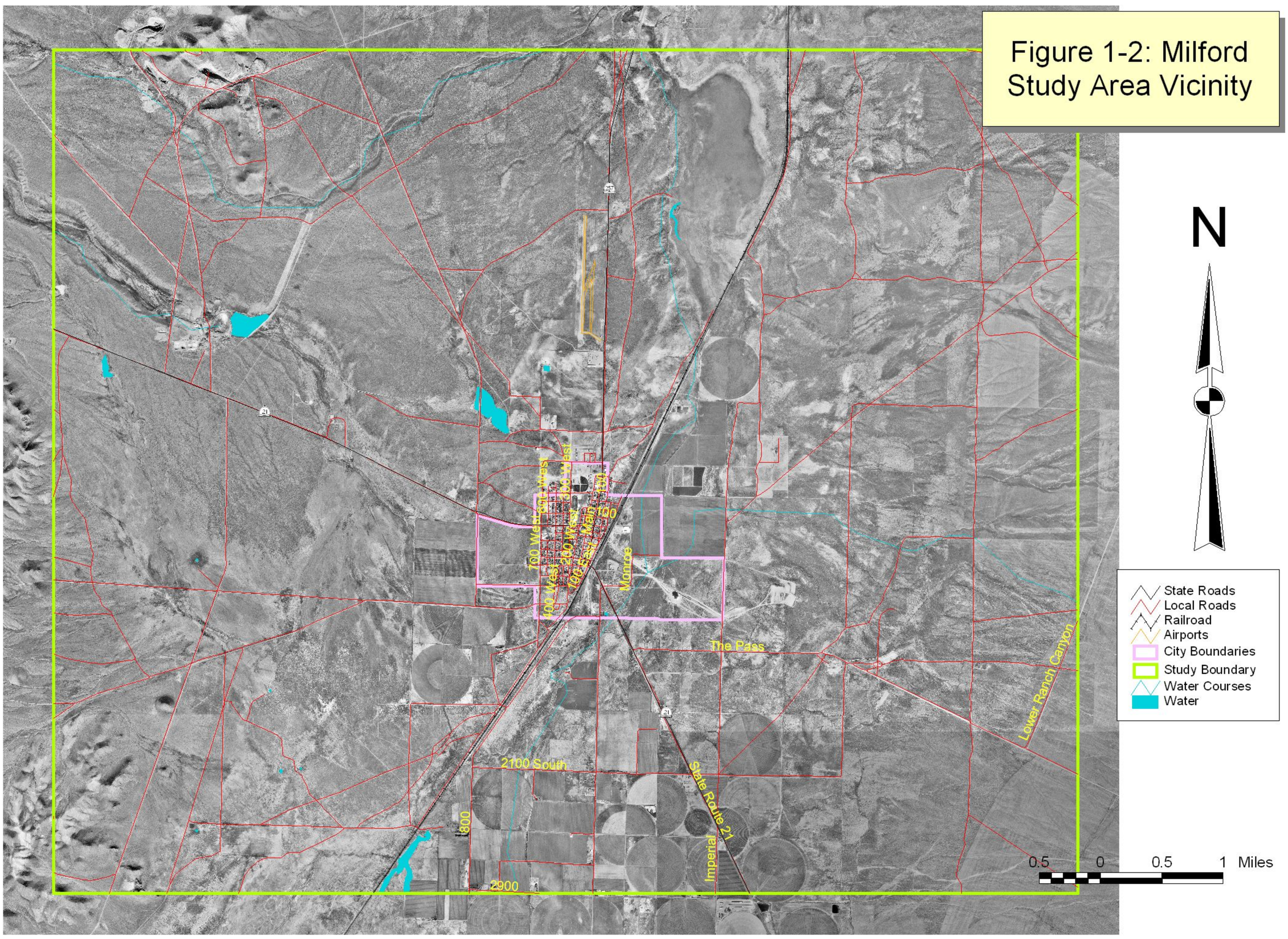


Figure 1-2: Milford Study Area Vicinity



2. Existing Conditions

An inventory and evaluation of existing conditions within the study area was conducted to identify existing transportation problems or issues. The results of the investigation follow.

2.1. Land Use

In order to analyze and forecast traffic volumes, it is essential to understand the land use patterns within the study area. Much of the City is zoned Residential, but there are also many issues dealing with commercial and industrial properties. By analyzing the patterns or changes in land use, we can better predict the ever-changing transportation needs.

The Milford City Zoning map follows on the next page.

2.2. Environmental

In Utah there are a variety of local environmental issues. Each of the cities and counties need to look at what are the environmental issues in their areas on a case-by-case basis. There are many resources that can help local entities to determine what issues need to be addressed and how any problems that may exist can be resolved.

Some of the environmental concerns around the State are wetlands, endangered species, archeological sites, and geological sites among other issues. Environmental concerns should be addressed when looking at an area for any type of improvement to the transportation system. Protecting the environment is a critical part of the transportation planning process.

2.3. Socio-Economic (Census Brief: Cities and Counties of Utah, May 2001)

Milford City ranks 116th for population in the State of Utah, out of 235 incorporated cities and towns. Historical growth rates have been identified for this study, because past growth is usually a good indicator of what might occur in the future. Chart 2-1 identifies the population growth over the past 50 years for the State of Utah, Beaver County and Milford City. Chart 2-2 identifies that population change in Milford City has ranged from (–14.39%) between 1980 and 1990 to gaining 31.07% between 1990 and 2000, while growth in the State has gained between 18 and 38 percent during the past 50 years.

welling Unit per acre
nit per acre

FEATURES

1. Municipal Golf Course
2. Elementary School
   - -Outdoor Basketball
   - -Soccer Field
   - -Playgrounds (2)
3. High School
   - -Football Field
   - -Track
   - -Baseball Field
   - -Tennis Courts (2)
4. Old City Park
5. Swimming Pool (Covered)
6. Pavillion Park
   - -Expanded, Covered Pavillion
   - -Restroom Facilities
   - -Playground Equipment
   - -Volleyball Court
7. Ball Park Complex
   - -3 Fields
   - -Bleachers
   - -Concession Stand
   - -Batting Cage
8. ~~Little League Field~~
9. Horse Arena
10. Library Hill Park

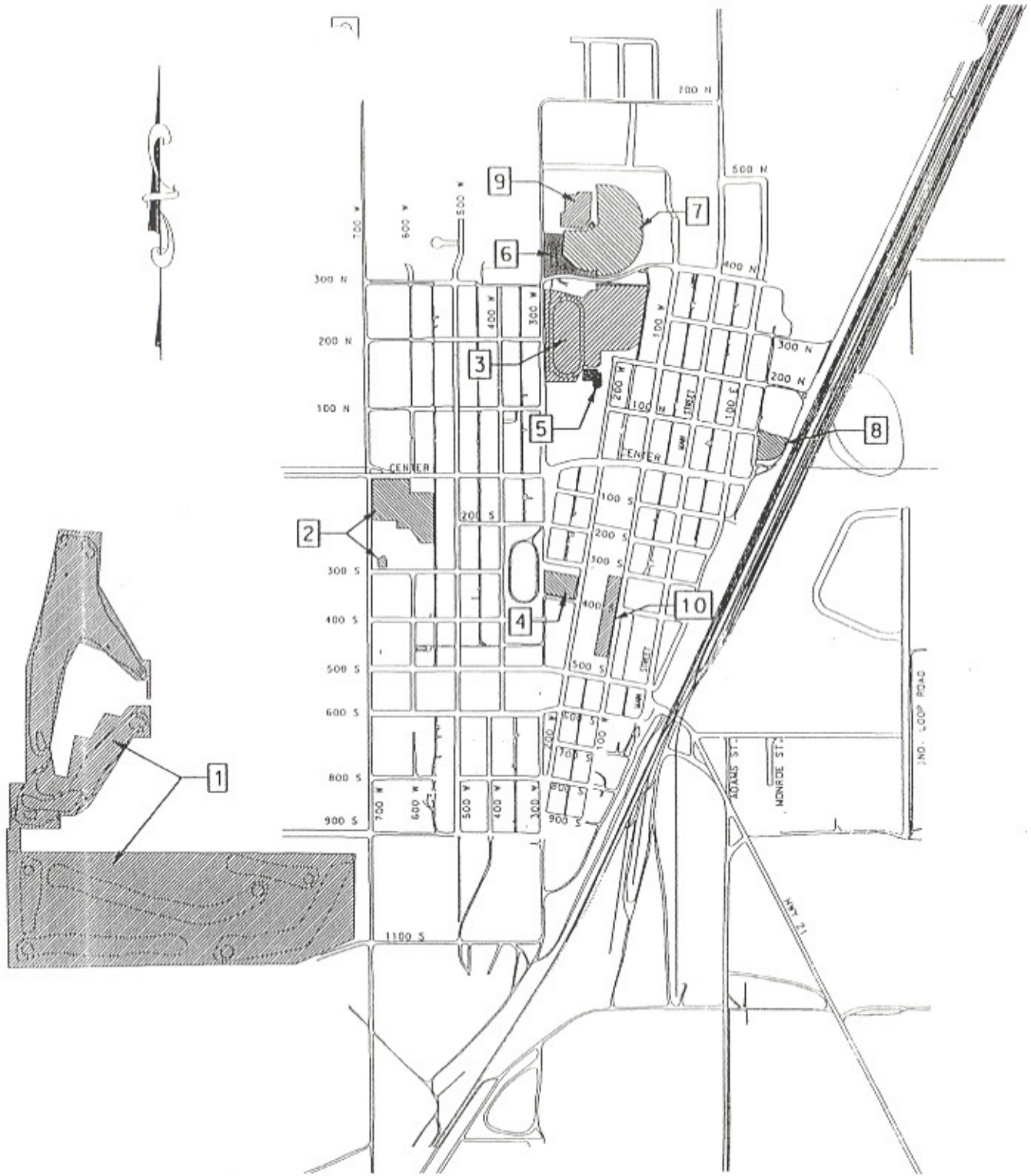
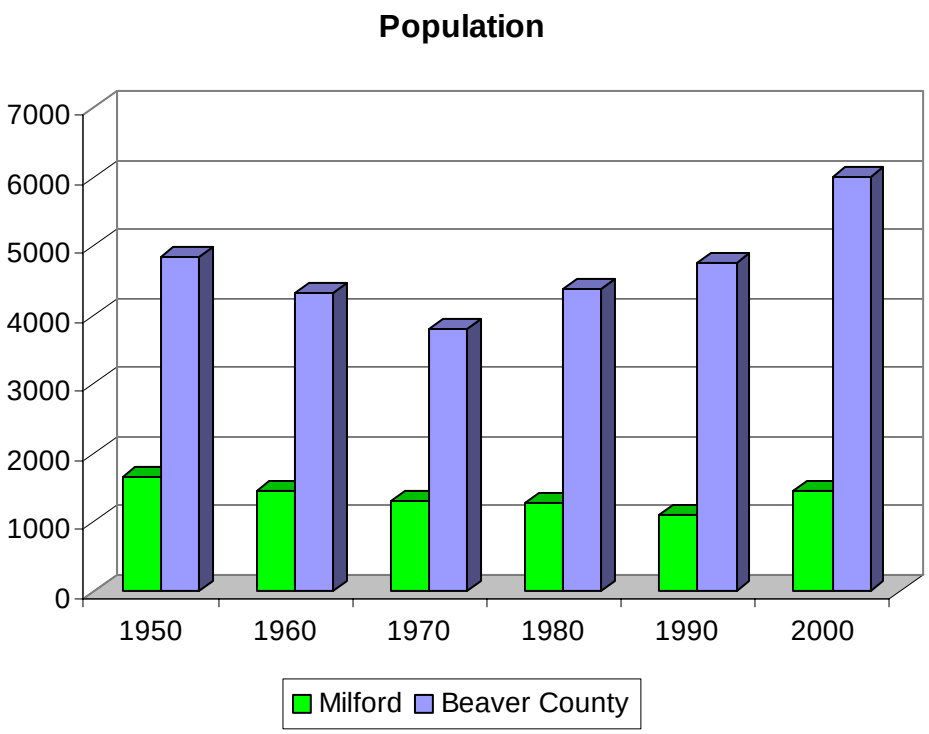


Chart 2-1. Population Data

Population			
Year	Utah	Beaver County	Milford City
1950	688,862	4,856	1,673
1960	890,627	4,331	1,471
1970	1,059,273	3,800	1,304
1980	1,461,037	4,378	1,293
1990	1,722,850	4,765	1,107
2000	2,233,169	6,005	1,451



Source: U.S. Bureau of the Census
http://www.govenor.utah.gov/dea/OtherPublications.html

Chart 2-3 identifies yearly population growth rates for the State of Utah and Beaver County.

As the State population has grown every decade from 1950 until 2000, Beaver County has also showed a slower, yet consistent, rate of growth in population over the same period.

Milford City has some unique demographic characteristics when compared with the State, particularly with age demographics. In the 25 to 54-age category, the State is at 38.6% the County is at 35.7% and the City is at 35.2%. For the 65+-age category, the State is at 8.5%, the County is at 13.9% and the City is at 12.3%. The State's median age is 27.1 years and the County's median age is 30.8 years, City's median age is 27.9 years. Another interesting statistic is that of Veteran status with State at 10.7%, County at 13.0%, and Milford City at 12.6%.

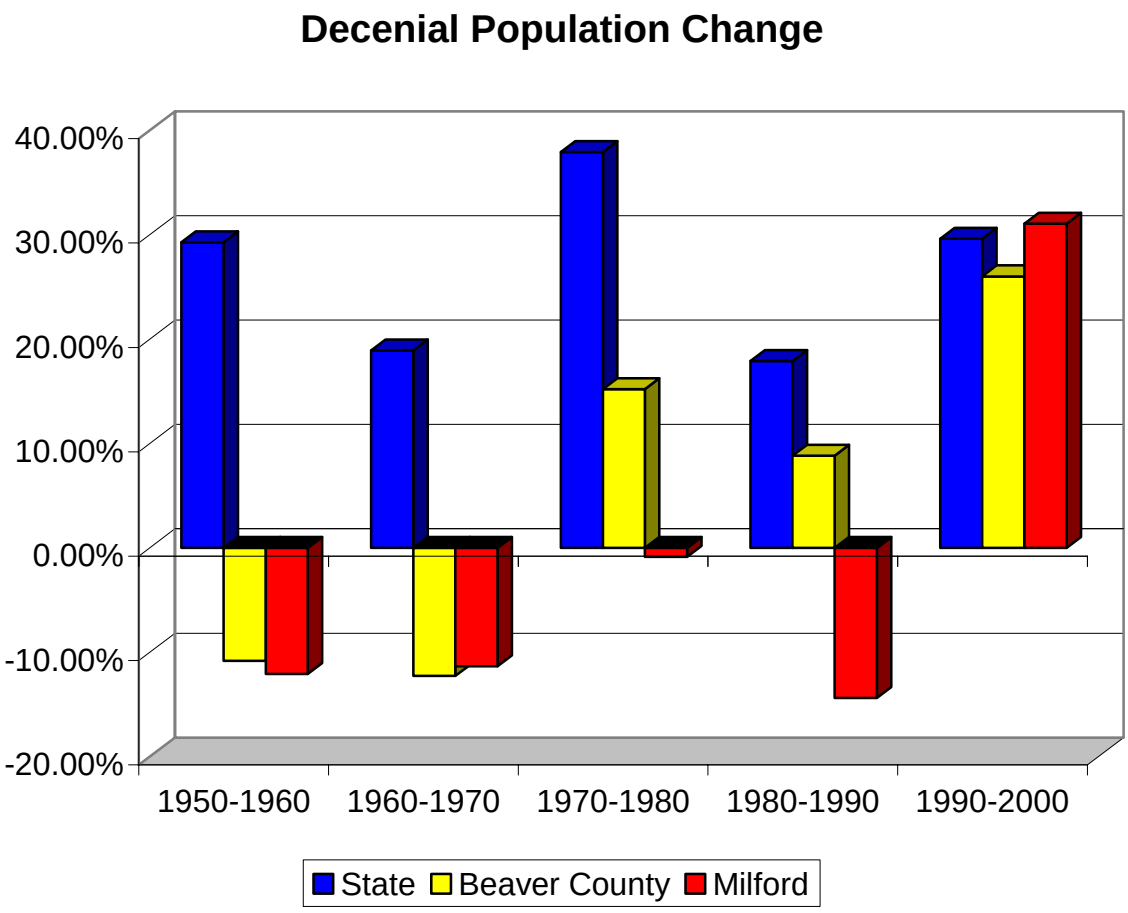
The 2000 median household income in Milford City is $35,809, compared to the State median household income of $45,726.

The unemployment rate in Milford City was 1.6 percent in 2000. According to the Utah Department of Employment Security (UDES), in 2000 there were approximately 642 employed people in Milford City or 65.4% of the population. The city has 10 unemployed people, which is 1 % of the population. There are 2,546 employed people in Beaver County or 59% percent of the population. The county has 56 people unemployed, which is 1.3 % of the population.

The majority of employees in Beaver County work in three primary employment sectors: Government Trade, and Services as shown in Chart 2-5. In the county, these sectors make up 76% of the labor force. Another interesting note was that housing built from 1990-2000 were 11.9% of total for Milford City compared to 25% for the state. Also homes built before 1939 were 30.3% of the total for Milford City with 10% for the state.

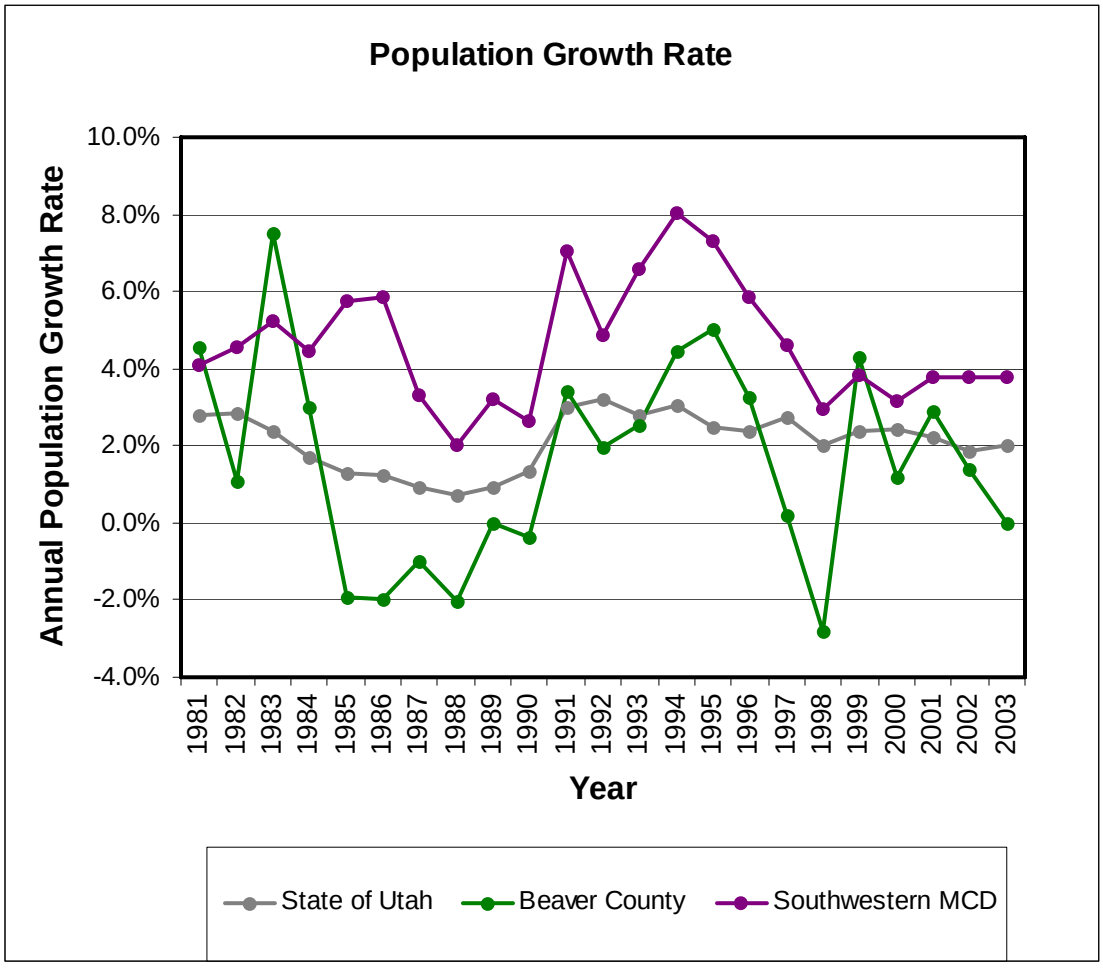
Chart 2-2. Population Change Data

Decade	State of Utah	Beaver County	Milford City
1950-1960	29.29%	-10.81%	-12.07%
1960-1970	18.94%	-12.26%	-11.35%
1970-1980	37.93%	15.21%	-0.84%
1980-1990	17.92%	8.84%	-14.39%
1990-2000	29.62%	26.02%	31.07%



Source Data: U.S. Bureau of the Census
http://www.govenor.utah./dea/OtherPublications.html

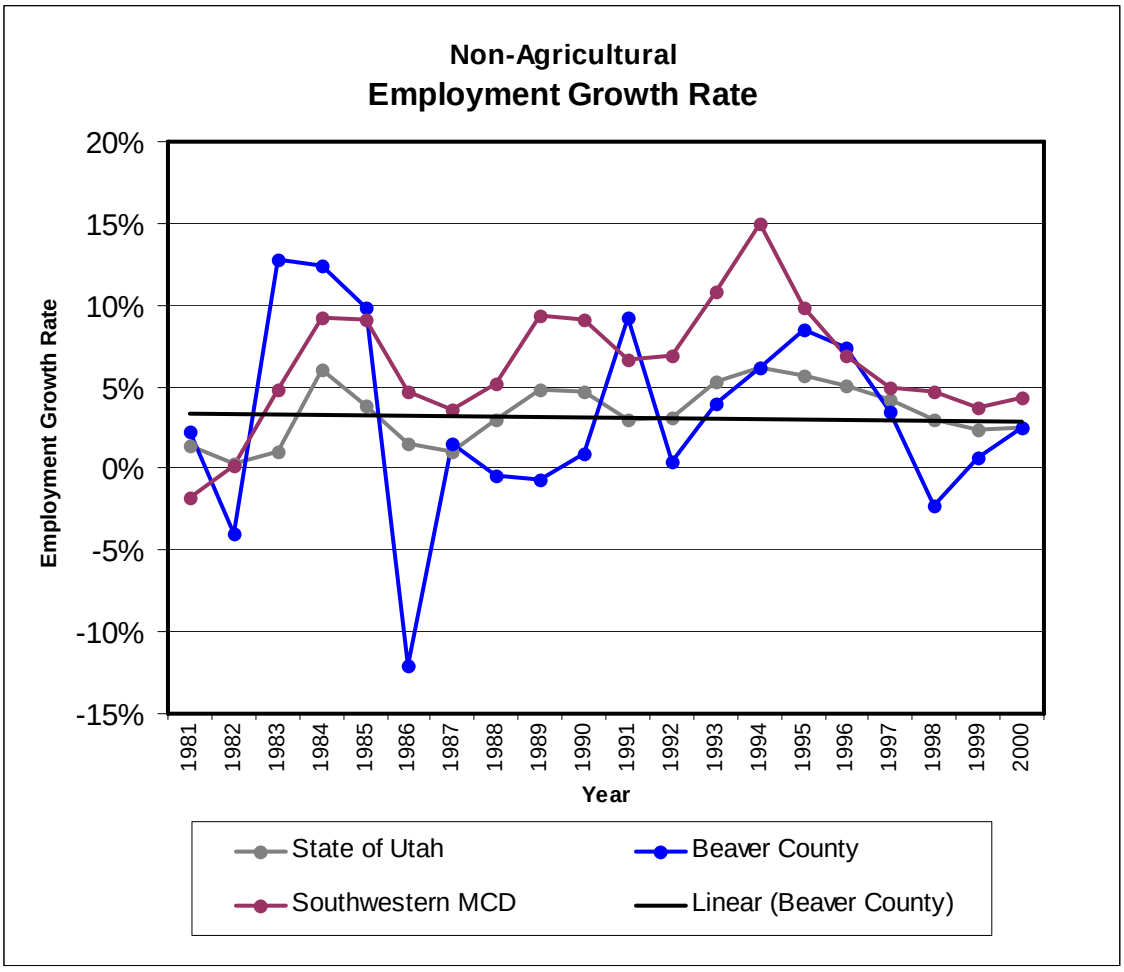
Chart 2-3. Population Growth Rate (1980-2000)



MCD = Multi-County Districts, Southwest MCD = Beaver, Garfield, Iron, Kane & Beaver Counties

Source: Governors Office of Planning and Budget
http://www.governor.utah.gov/dea

Chart 2-4. Employment Growth Rate (1980-2000)



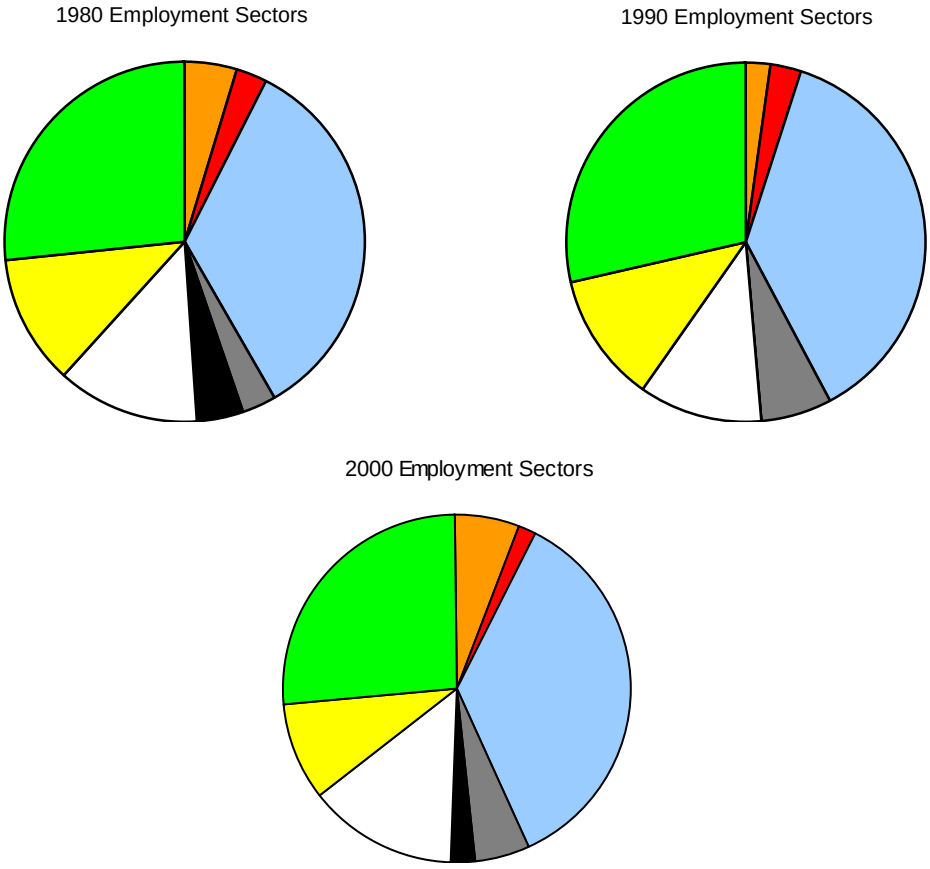
MCD = Multi-County Districts, Bear River MCD = Beaver, Garfield, Iron, Kane & Beaver Counties

Source: Governors Office of Planning and Budget
http://www.governor.utah.gov/dea

Chart 2-5. Employment Sectors (1980-2000)

Sector	1980	1990	2000	Δ% 1980-2000
Construction	4.85%	2.34%	6.03%	125.49%
FIRE	2.76%	2.73%	1.89%	24.14%
Government	34.70%	37.26%	35.27%	84.38%
Manufacturing	2.95%	6.39%	5.08%	212.90%
Mining	4.18%	0.00%	1.99%	-13.64%
Services	12.93%	11.15%	13.94%	95.59%
TCPU	11.98%	11.61%	9.22%	39.68%
Trade	27.00%	28.84%	26.78%	79.93%

FIRE = Finance, Insurance & Real Estate
TCPU = Telecommunications & Public Utilities



Source: Governors Office of Planning and Budget
http://www.governor.utah.gov/dea/HistoricalData.html

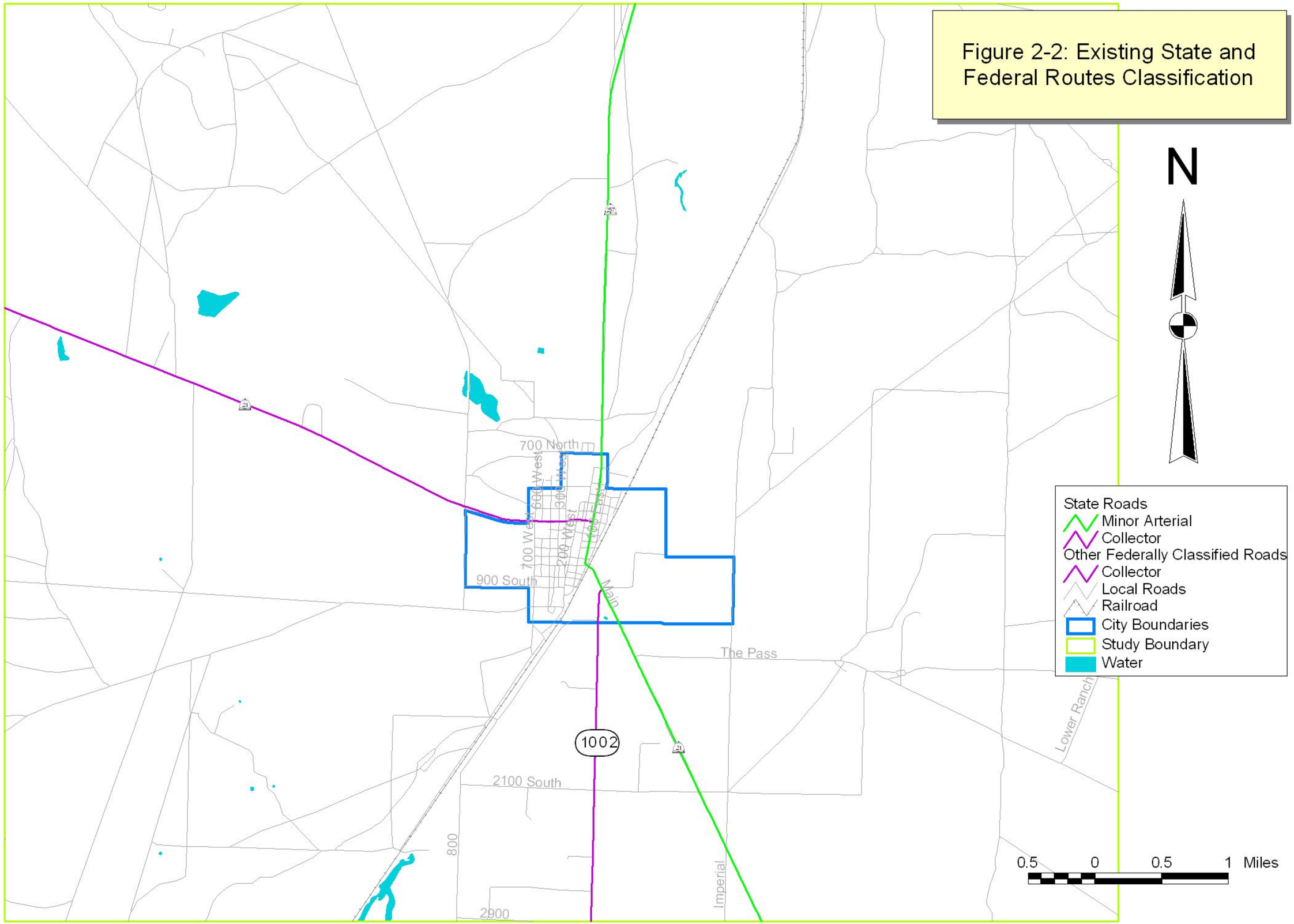
2.4. Functional Street Classification

This document identifies the current function and operational characteristics of the selected roadway network of Milford City. Functional street classification is a subjective means to identify how a roadway functions and operates when a combination of the roadway's characteristics are evaluated. These characteristics include; roadway configuration, right-of-way, traffic volume, carrying capacity, property access, speed limit, roadway spacing, and length of trips using the roadway.

The primary classifications used in classifying selected roadways of Milford City are: Minor Arterial, Major Collector, Minor Collector and Local. An Arterial's function is to provide traffic mobility at higher speeds with limited property access. Traffic from the local roads is gathered by the Collector system, which provides a balance between mobility and property access trips. Local streets and roads serve property access based trips and these trips are generally shorter in length.

The Milford City area is accessed by SR-21 as well as by SR-257. The functionally classified system is currently being revised statewide**.** The current functionally classified system generally defines the higher traffic roads, so only minor additions or changes will be required.

Figure 2-2: Existing State and Federal Routes Classification



2.5 Bridges

There are **two** bridges on the state system located in the study area that could be eligible for federal bridge maintenance, rehabilitation, or replacement funds. Bridges are maintained and minor repairs made with maintenance funds. A bridge is rehabilitated or replaced as it deteriorates over time and as traffic volumes increase. (Figure 2-3 Bridge Sufficiency Rating)

Table 1 compares the bridges in the study area and identifies their sufficiency rating and location. Sufficiency rating indicates current condition of the structure with a rating of 100 showing a structure that is in excellent shape. A rating nearing 50 will reveal a structure that is in need of attention and is eligible for federal funding.

Table 1. Bridges

Number	Location	Maximum Span	No. Lanes & Road Width	Sidewalk	Sufficiency Rating
D-510	SR-21 Milford/Nevada Wash	9.4 M	9.2 M 2 Lanes	No	58.0
E-2269	SR-257 Beaver River	14.3 M	9.1 M 2 Lanes	No	88.7

Bridge Sufficiency Rating – Figure 2-3
Source: Utah Department of Transportation/Structures Division

2.6 Traffic Counts

Recent average daily traffic count data were obtained from UDOT. Table 2 shows the traffic count data on the key roadways of the study area. The number of vehicles in both directions that pass over a given segment of roadway in a 24-hour period is referred to as the average annual daily traffic (AADT) for that segment.

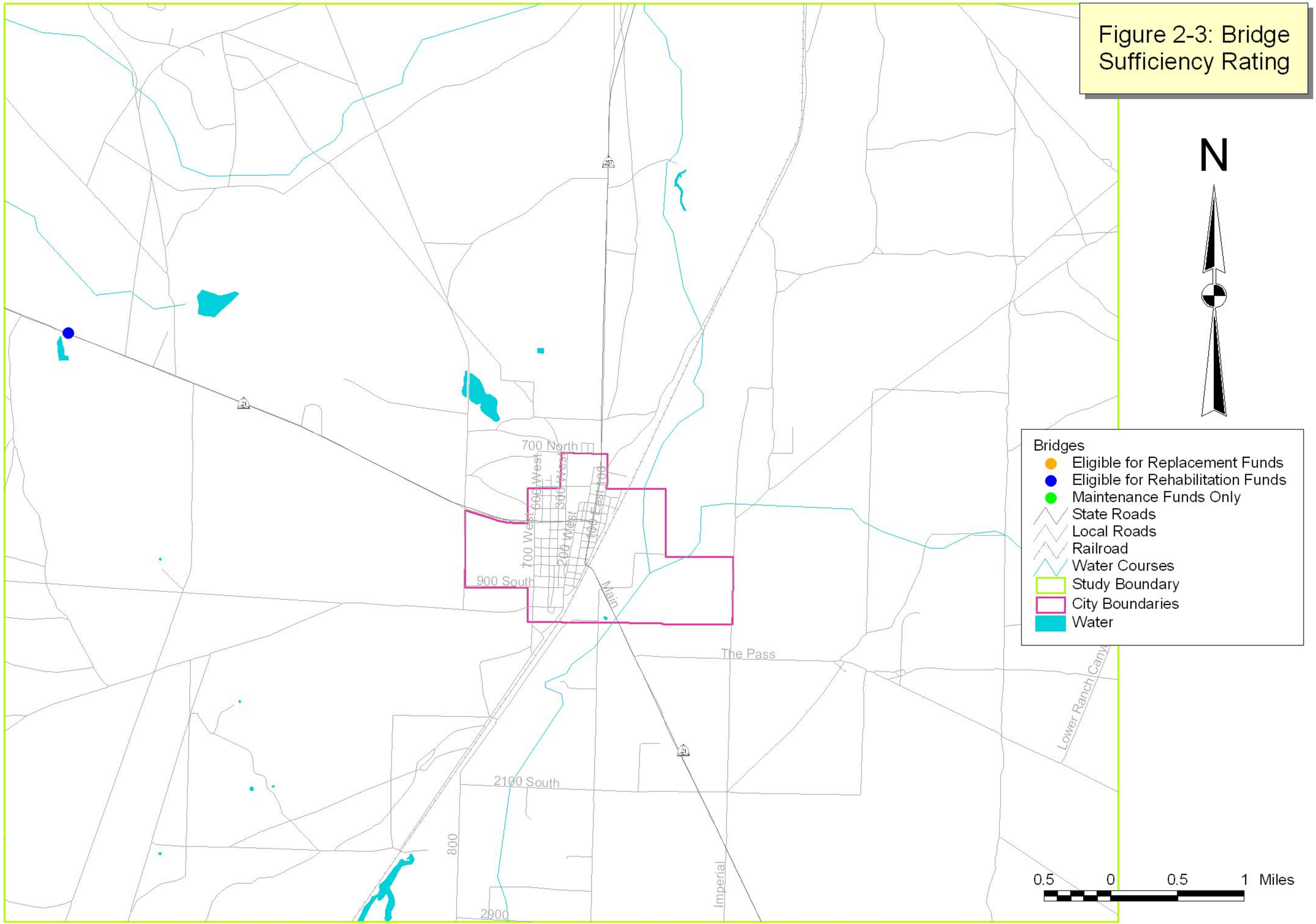
Table 2. Average Annual Daily Traffic

Road	Segment	Year	AADT
SR-21	East Incorporated Limits Milford	2003	1,405
SR-21	Junction SR-257 in Milford	2003	2,705
SR-21	West Incorporated Limits Milford	2003	1,85
SR-257	Junction SR-21 in Milford	2003	490
SR-257	North Incorporated Limits Milford	2003	525

Source: Utah Department of Transportation

These are averages for the entire year. Milford City experiences a significant increase in traffic during the summer months. UDOT maintains 86 continuously operated automatic traffic recorders (ATR) throughout the state highway system. ATRs collect data continuously throughout the year in order to determine monthly, weekly, daily, and hourly traffic patterns. No ATRs are located in or near the study area.

Figure 2-3: Bridge Sufficiency Rating



A map illustrating existing and future traffic, peak season traffic, and roadway capacities is presented in the Traffic Forecast section 3.2.

2.7 Traffic Accidents

Traffic accident data was obtained from UDOT's database of reported accidents from 2003. Table-3 summarizes the accident statistics for those segments for the year 2002. Additional information includes the average daily traffic, the number of reported accidents, and the accident rates. The roadway segment accident rates were determined in terms of accidents per million vehicle miles traveled. The crash rates for each roadway segment are compared to the expected crash rate for similar facilities across the state.

Upon review of the accident data for the state system, there appears to be a higher than expected accident rates at the following locations:

- On SR-257 From milepost 0.0 to milepost 0.53

The remainder of the state system shows a lower than expected accident rate. Figure 2-4 shows accident data taken from 1999-2001, which shows various segments of the state highway system and associated accident data.

Milford City may wish to review the accident history for the local street system to identify any specific accident hot spot locations.

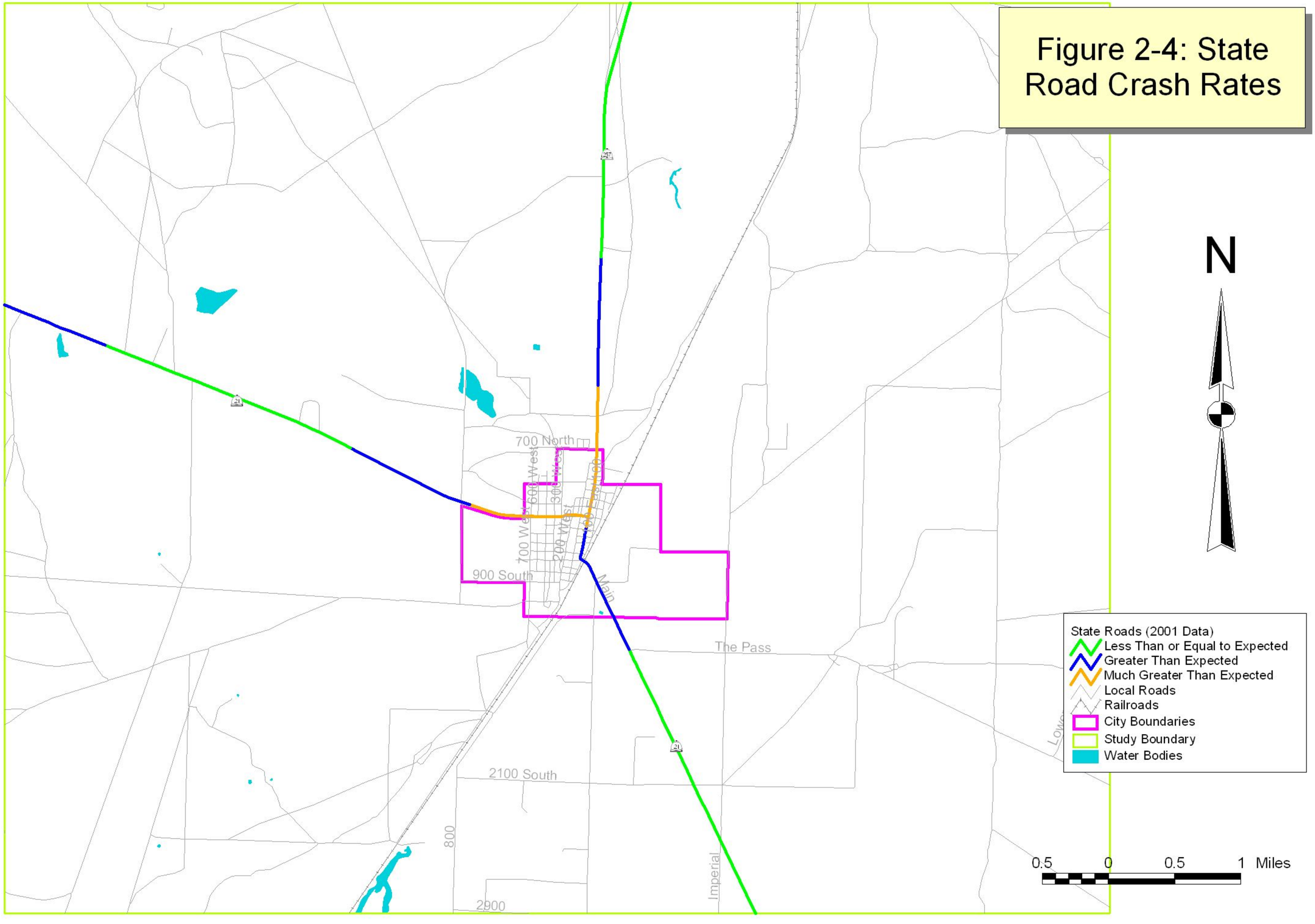
Table 2-3. Crash Data 2003

					Crash Rate	
Road	**From Milepost**	**End Milepost**	**ADT (2002)**	**# Crashes (2002)**	**Actual**	**Expected***
21	72	76.46	520	0	0.00	2.37
21	76.47	76.91	1685	0	0.00	2.37
21	76.92	77.22	1780	0	0.00	2.19
21	77.23	77.72	2705	0	0.00	1.78
21	77.73	81.1	1405	1	0.56	2.19
257	0	0.53	490	3	19.89	2.19
257	0.54	4.1	525	0	0.00	2.19

* Statewide average accident rates for functional class and volume group.

Red indicates higher than expected rates of accidents

Figure 2-4: State Road Crash Rates



2.8 Bicycle and Pedestrian

The Federal Highway Administration recognizes the increasingly important role of bicycling and walking in creating a balanced, intermodal transportation system, and encourages state and local governments to incorporate all necessary provisions to accommodate bicycle and pedestrian traffic. In following this directive, Milford City is encouraged to adopt a "complete streets" philosophy that allows for the advancement of a transportation system for both motorized and non-motorized travel.

2.8.1 Biking/Trails

Milford City does not currently have dedicated bike lanes on any of its roadways. However, many of the roads leading into and around the City include sufficient shoulder-width that provides on-street bicycling opportunities. Although there doesn't appear to be an extraordinarily high number of cyclists that travel through the area, the ample shoulder is a safety feature appreciated by those who do ride in Milford City.

While the road shoulder conditions accommodate on-street cycling, mountain biking is not a common occurrence around Milford City. The City does not have any defined bicycle trails and there are no plans for these types of facilities in the near future.

Milford City is rural in nature and as such ATV use is a popular activity in the community. Indications are that such heavy use has created a few problems, such as the vehicles being ridden in vacant lots and alleys. The City is aware of these types of issues and the need to get them resolved in the near future.

2.8.2 Pedestrian

Most of the City has sidewalk in good condition that provides for consistent pedestrian travel; however there are a few locations within the City where sidewalk is missing. Pedestrian safety is a concern for the City and there is a requirement for developers to include sidewalk, curb and gutter in all new development plans to address this issue.

2.9 Public Transportation

There is no city bus system or intercity public transportation serving Milford. The last intercity public transportation to serve the Milford area was the Amtrak "Desert Wind" passenger train which was discontinued on May 11, 1997. The nearest Amtrak rail passenger service is Amtrak's "California Zephyr" serving Salt Lake City. Intercity bus service is provided by Greyhound with stops in Fillmore, Beaver and St George on routes linking southern California with Chicago and New York City, as well as Salt Lake City to Phoenix. Scheduled commuter airline service is available in Cedar City, with major airline service available in Salt Lake City and Las Vegas.

Transportation for seniors and the handicapped is provided by two shuttle buses operated by the Milford Senior Center and Beaver County Service District #3. These buses are available to provide transportation to local hospitals, care centers, doctor's appointments, and to special events

2.10 Freight

Milford's history as a freight transportation center began on May 15, 1880 when the first train arrived in town from Salt Lake City. The Utah Southern Railroad was built south from the Wasatch Front to serve the mining town of Frisco, located about 17 miles west of Milford. Utah Southern was eventually merged into the Los Angeles & Salt Lake Railroad, which extended the line from Utah southwest to Los Angeles. Known as the "Salt Lake Route," the LA & SL between Utah and southern California was completed on January 30, 1905 at a point 34 miles southwest of modern-day Las Vegas. The Union Pacific Railroad had been involved as a part owner of the LA & SL since the route was extended to southern California, and on April 27, 1921 the UP assumed full control of the Salt Lake Route.

Railroad:

Today, the Union Pacific is America's largest railroad with over 33,000-miles of track, including the Salt Lake Route mainline which links the busy seaports and markets of southern California with UP's Overland Route mainline to Chicago at Ogden, Utah. Milford serves as a crew-change point between Salt Lake City and Las Vegas for transcontinental freight trains, and as a switching yard for local freight trains serving industries from Cedar City to Lynndyl. Milford Yard also handles mainline switching for the fast-growing Las Vegas, Nevada metropolitan area.

On average more than 30 freight trains pass through Milford every day, carrying over 45 million tons of freight each year. Coal from Utah mines en route to the Nevada Power steam-electric generating station at Moapa, Nevada are the heaviest trains operating through Milford on the Salt Lake Route mainline. Solid trains of new automobiles en route from Detroit to southern California, as well as trains of import autos bound from the Port of Long Beach to the Midwest and east coast are a daily sight in Milford, as are manifest freight trains carrying a variety of commodities ranging from finished lumber to cement to furniture.

Two types of freight trains play a major role in rail operations in Milford, "Doublestack" intermodal

trains and one-commodity "Unit trains" transporting animal feed ingredients. Dozens of double-stack trains pass through Milford each week en route to and from the Ports of Los Angeles and Long Beach and Chicago and points east. As one of Union Pacific's two main east/west routes serving southern California, the Salt Lake Route mainline is vital to America's import/consumer-based economy.

On the local scene, the largest generator of freight via any mode in the Milford area is Circle 4 Farms. Raising 1.3 million hogs annually at a massive pig farm complex located about 15 miles southwest of Milford, Circle 4 consumes vast amounts of commodities that are processed to make pig feed. Located in the Milford Industrial Park just east of downtown, the Circle 4 feed mill receives a 75-car unit train of corn every ten days via the Union Pacific. Each car on these 75-car trains is a covered hopper car with a carrying capacity of 100 tons. Additional rail car loads of feed ingredients arrive at the Circle 4 feed mill each week.

Union Pacific, along with its contract crew-transportation service, employ more than 125 people as a apart of the railroad's Milford operations.

Truck:

Although not located on a primary highway truck route, Milford sees a fair amount of truck traffic passing through the community as well as serving local industries such as Circle 4 Farms. State Highways 21 and 257 serve local industries that rely on truck transportation as well as linking Milford with primary freight routes in the region such as Interstate Highway 15, U.S. Highways 93, 50 and 6. Some long distance truckers opt to travel through Milford on State Route 21 as a short cut between I-15 at Beaver and the Great Basin Highway, U.S. 93 at Ely, Nevada. As such, Milford sees a limited amount of east/west through truck traffic, as well as north/south truck movements, many of which are associated with CANAMEX Corridor traffic. The CANAMEX Corridor links Canada with Mexico via the Mountain West and results from the North American Free Trade Agreement (NAFTA).

Major freight-generating industries:

Circle 4 Farms:

A relative newcomer to the Milford area, Circle 4 Farms was established in the early 1990's primarily to raise hogs to be shipped by truck to packinghouses in the Los Angeles area. Prior to Circle 4 Farms, live hogs were shipped by rail via the Union Pacific from Nebraska to Los Angeles via Milford in what were the last livestock shipments by rail in the United States. Circle 4 has evolved into the largest generator of freight, and the largest employer in the Milford area. Circle 4 Farms currently employs more than 55

people in Milford at its feed mill and downtown general offices, while the nearby pig farm complex employs an additional 380.

To support the 1.3 million hogs they raise each year in southwestern Utah, Circle 4 receives more than 400,000 tons of feed and supplies annually. During 2004 Circle 4 received 3,959 rail car shipments and 1,392 truck shipments at its Milford feed mill. To get the processed pig feed from the mill in Milford to the farm located about 15 miles away, Circle 4 operated 10,083 one-way truck movements. It is important to note however, that with the exception of 177 inbound truck shipments that arrived in town on State Route 257, none of the trucks serving Circle 4 pass through Milford city proper.

Circle 4 operates a 1942-vintage General Motors diesel-electric switch engine to work the many rail cars arriving and departing from its Milford feed mill. This historic locomotive was rebuilt by its original owner Union Pacific in 1979 as a part of the railroad's SW10/SW12 program, and was acquired by Circle 4 in the early 1990's.

Within the next five years, Circle 4 expects to construct an unloading loop track at the Milford feed mill that will allow the 75-car unit trains of corn to unload without having to be broken-up into several smaller groups of cars and switched by the company's switch engine. Such unloading loops are common in the handling of bulk commodities by rail.

Basin Perlite:

Located on the same rail spur that serves Circle 4 Farm's feed mill, Basin Perlite was established in Milford in the mid-1990's and employs 24 in the Milford area. Perlite is used for a variety of applications and is produced from volcanic rock mined in the nearby Mineral Mountains and trucked to the Milford facility. On average 28 trucks per week bring raw material from the mine to the Milford plant, while an average of 15 trucks per week leave the Milford facility with finished product. By 2006 the number of outbound truck shipments should increase to between 20 and 25 trucks per week. Basin Perlite ships an average of 10 rail cars of perlite product each week to customers as far distant as Pennsylvania and Mexico.

Air Freight:

At present to air cargo service is provided to the Milford Airport, however planned or proposed industrial development in the area, along with a proposed runway extension at Milford could bring such service to the community. Currently the nearest air cargo service is provided at the Cedar City airport, with major air cargo operations being handled out of either Las Vegas or Salt Lake City.

Future development:

The region surrounding Milford is rich in a variety of mineral deposits including iron ore and copper. As of this writing in early 2005 there is interest in developing these deposits in the not-so-distant future, which would bring new industries, jobs, and freight traffic to Milford. Aside from resource-based economic development, Milford and Beaver County are aggressively promoting their location and freight-transportation services to a number of manufacturing and distribution businesses that could also greatly alter the freight transportation scene in Milford as the 21st Century progresses.

2.11 Aviation Facilities & Operations

Milford Airport was recently renamed "Ben and Judy Briscoe Field" after two prominent local citizens who served as the airport's managers for a number of years. Located at en elevation of 5,039 feet, the Ben and Judy Briscoe Field is located one mile north of town along State Route 257.

Equipped with an asphalt-paved, 5,039-foot long, 75-foot wide runway, #16/34, Milford's airport has hanger space for four light aircraft as well as three helipads. There are no aircraft maintenance facilities and no parallel taxiway at the Milford Airport. The airport is equipped with pilot-activated runway and visual approach lighting, as well as an all-night operating rotating beacon light. Ben and Judy Briscoe Field have 100 Low Lead and Jet-A fuels

available on a 24-hour basis, as well as a pilot lounge co-located with the airport office. There is currently no scheduled airline or air cargo service into Milford.

Ben and Judy Briscoe Field recently had its parking/taxiway area repaved and restriped, with runway crack sealing planned for 2005. The City of Milford's long-range plan for the airport is to construct a parallel taxiway in addition to repaving and restriping runway 16/34. In order to attract both corporate jet aircraft as well as Forest Service fire-fighting Air Tankers, Milford hopes to extend runway 16/34 in stages to 10,000 feet. The first runway extension is hoped to involve an additional 1,600 feet in length.

Although not serving Milford itself, scores of commercial and military aircraft pass over the community every day, making use of a Federal Aviation Administration VORTAC navigation beacon located southwest of town. Milford sits beneath the main air routes linking Los Angeles with Denver, Chicago, and the east coast, San Francisco with Dallas, New Orleans, and Florida, Phoenix with the Pacific Northwest, and the polar air route for inbound flights from Europe to Los Angeles. Large military aircraft operating areas are maintained by the United States Air Force to the west and northwest of Milford, which involve considerable low-level operation by high performance combat aircraft.

2.12 Revenue

Maintenance of existing transportation facilities and construction of new facilities come primarily from revenue sources that include the Milford City general fund, federal funds and State Class C funds.

Financing for local transportation projects consists of a combination of federal, state, and local revenues. However, this total is not entirely available for transportation improvement projects, since annual operating and maintenance costs must be deducted from the total revenue. In addition, the City is limited in their ability to subsidize the transportation budget from general fund revenues.

2.12.1 State Class B and C Program

The distribution of Class B and C Program monies is established by state legislation and is administered by the State Department of Transportation. Revenues for the program are derived from State fuel taxes, registration fees, driver license fees, inspection fees, and transportation permits. Twenty-five percent of the funds derived from the taxes and fees are distributed to cities and counties for construction and maintenance programs.

Class B and C funds are allocated to each city and county by the following formula: 50% based on the population ratio of the local jurisdiction with the population of the State, 50% based on the ratio that the Class B roads weighted mileage within each county and the class C roads weighted mileage within each municipality bear to the total class B and Class C roads weighted mileage within the state. Weighted means the sum of the following: (i) paved roads multiplied by five; (ii) graveled road miles multiplied by two; and (iii) all other road types multiplied by one. (Utah Code 72-2-108) For more information go to UDOT's homepage @ www.udot.utah.gov, tab on "Doing Business" select the tab for "Local Government Assistance" here you will find the Regulations governing Class B&C funds

The table below identifies the ratio used to determine the amount of B and C funds allocated.

Apportionment Method of Class B and C Funds

Based on	Of
50%	Roadway Mileage *Based on Surface Type Classification (Weighted Measure) Pave Road (X 5) Graveled Road (X 2) Other Road (X 1)
50%	Total Population

Class B and C funds can be used for maintenance and construction of highways, however thirty percent of the funds must be used for construction or maintenance projects that exceed $40,000. Class B and C funds can also be used for matching federal funds or to pay the principal, interest, premiums, and reserves for issued bonds.

Milford City received $78,775.64 in 2003 for its Class C fund allocation.

2.12.2 Federal Funds

There are federal monies that are available to cities and counties through federal-aid program. The funds are administered by the Utah Department of Transportation. In order to be eligible, a project must be listed on the five-year Statewide Transportation Improvement Program (STIP).

The Surface Transportation Program (STP) provides funding for any road that is functionally classified as a collector street or higher. STP funds can be used for a range of projects including rehabilitation and new construction. The Joint Highway Committee programs a portion of the STP funds for projects around the State for urban areas. A portion of the STP funds can be used in any area of the State, at the discretion of the State Transportation Commission.

Transportation Enhancement funds are allocated based on a competitive application process. The Transportation Enhancement Advisory Committee reviews the applications and then a portion of those are recommended to the State Transportation Commission for funding. Transportation enhancements include 12 categories ranging from historic preservation, bicycle and pedestrian facilities to water runoff mitigation. Other funds that are available are State Trails Funds, administered by the Division of Wildlife Resources.

The amount of money available for projects specifically in the study area varies each year depending on the planned projects in UDOT's Region Four. As a result, federal aid program monies are not listed as part of the study area's transportation revenue.

2.12.3 Local Funds

Milford City, like most cities, has utilized general fund revenues in its transportation program. Other options available to improve the City's transportation facilities could involve some type of bonding arrangement, either through the creation of a redevelopment district or a special improvement district. These districts are organized for the purpose of funding a single, specific project that benefits and identifiable group of properties. Another source is through general obligation bonding arrangements for projects felt to be beneficial to the entire entity issuing the bonds.

2.12.4 Private Sources

Private interests often provide alternative funding for transportation improvements. Developers construct the local streets within the subdivisions and often dedicate right-of-way and participate in the construction of collector or arterial streets adjacent to their developments. Developers can be considered as an alternative source of funds for projects because of the impacts of the development, such as the need for traffic signals or street widening. Developers should be expected to mitigate certain impacts resulting from their developments. The need for improvements, such as traffic signals or street widening can be mitigated through direct construction or impact fees.

3. Future Conditions

3.1. Land Use and Growth

Milford City's Transportation Master Plan must be responsive to current and future needs of the area. The area's growth must be estimated and incorporated into the evaluation and analysis of future transportation needs. This is done by:

- Forecasting future population, employment, and land use;
- Projecting traffic demand;
- Forecasting roadway travel volumes;
- Evaluating transportation system impacts;
- Documenting transportation system needs; and
- Identifying improvements to meet those needs.

This chapter summarizes the population, employment, and land use projections developed for the project study area. Future traffic volumes for the major roadway segments are based on projections utilizing 20 years of traffic count history. The forecasted traffic data are then used to identify future deficiencies in the transportation system.

3.1.1 Population and Employment Forecasts

The Governor's Office of Planning and Budget develop population and employment projections. The current population and employment levels, as well as the future projections for each are shown for Milford City and Beaver County in the following table.

Population and Employment

Year	City	County	
	Population	Population	Employment
2000	1,451	6,005	3,188
2030	2,137	9,653	4,710

3.1.2 Future Land Use

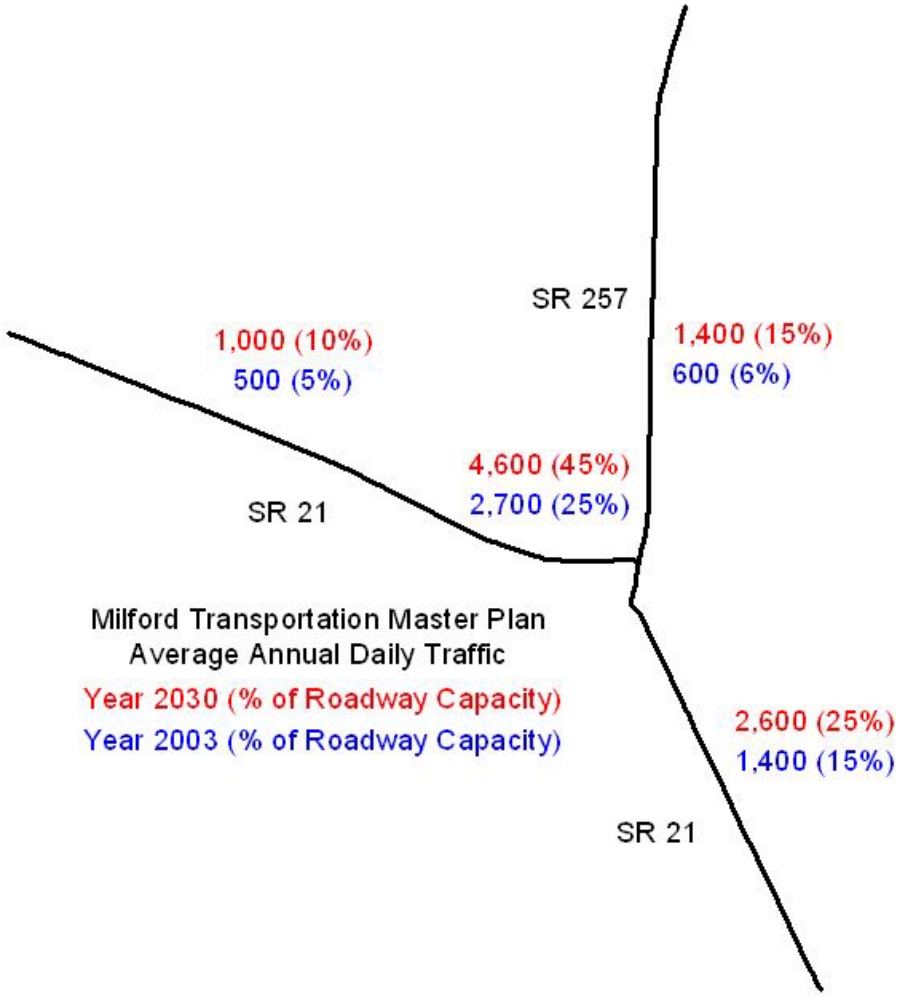
The City has an annexation plan that describes where it plans to grow. Some areas for developments were discussed during the course of the Transportation Master Plan. Updated Land Use documents can be found in the Milford City General Plan.

While specific development plans change with time, it is important to note possible areas of development within the Milford City area. Commercial and industrial growth is also important in understanding transportation needs.

3.2 Traffic Forecast

Traffic in the Milford area is growing and will continue to grow. Although the population projections from the Governors Office of Planning and Budget show a 2% annual growth, traffic has historically grown at about 3%. The volumes illustrated below present average

annual daily traffic for years 2003 and 2030 based on historical growth. SR 21 should reach about half of its capacity by the year 2030.



Route *SR 21*

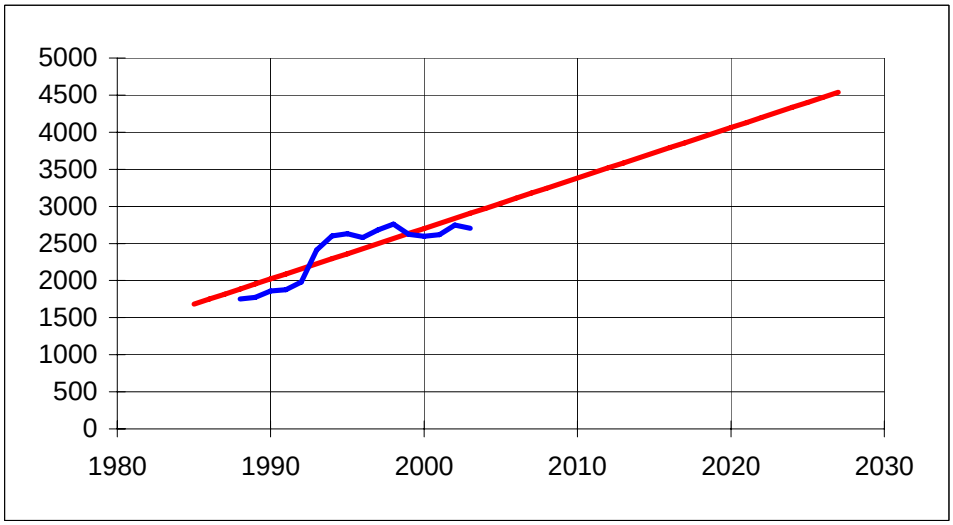
Limits *in Milford*

Year	AADT	Forecast
1985		1682
1986		1750
1987		1818
1988	1,750	1886
1989	1,775	1954
1990	1,860	2022
1991	1,875	2090
1992	1,980	2158
1993	2,410	2226
1994	2,600	2294
1995	2,630	2362
1996	2,580	2430
1997	2,685	2498
1998	2,760	2566
1999	2,622	2634
2000	2,595	2702
2001	2,620	2770
2002	2,750	2838
2003	2,705	2906
2004		2974
2005		3042
2006		3110
2007		3178
2008		3246
2009		3314
2010		3382
2011		3450
2012		3518
2013		3586
2014		3654
2015		3722
2016		3790
2017		3858
2018		3926
2019		3994
2020		4062
2021		4130
2022		4198
2023		4266
2024		4334
2025		4402
2026		4470
2027		4538

17% Trucks

Projection based on 1989 to 2003 data

2.5% growth rate → 68 vehicles/year



Notes

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Route *SR 21*

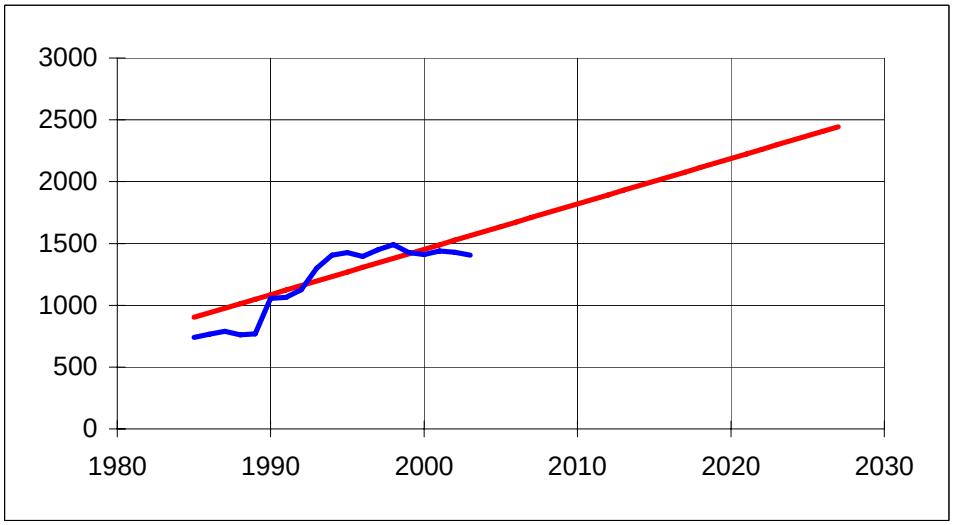
Limits *South (East) of Milford*

Year	AADT	Forecast
1985	740	902
1986	765	939
1987	790	976
1988	760	1012
1989	770	1049
1990	1,055	1086
1991	1,065	1122
1992	1,125	1159
1993	1,300	1196
1994	1,405	1233
1995	1,425	1269
1996	1,395	1306
1997	1,450	1343
1998	1,490	1379
1999	1,425	1416
2000	1,410	1453
2001	1,440	1490
2002	1,430	1526
2003	1,405	1563
2004		1600
2005		1636
2006		1673
2007		1710
2008		1747
2009		1783
2010		1820
2011		1857
2012		1893
2013		1930
2014		1967
2015		2004
2016		2040
2017		2077
2018		2114
2019		2150
2020		2187
2021		2224
2022		2261
2023		2297
2024		2334
2025		2371
2026		2407
2027		2444

17% Trucks

Projection based on 1989 to 2003 data

2.5% growth rate → 37 vehicles/year



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Route *SR 21*

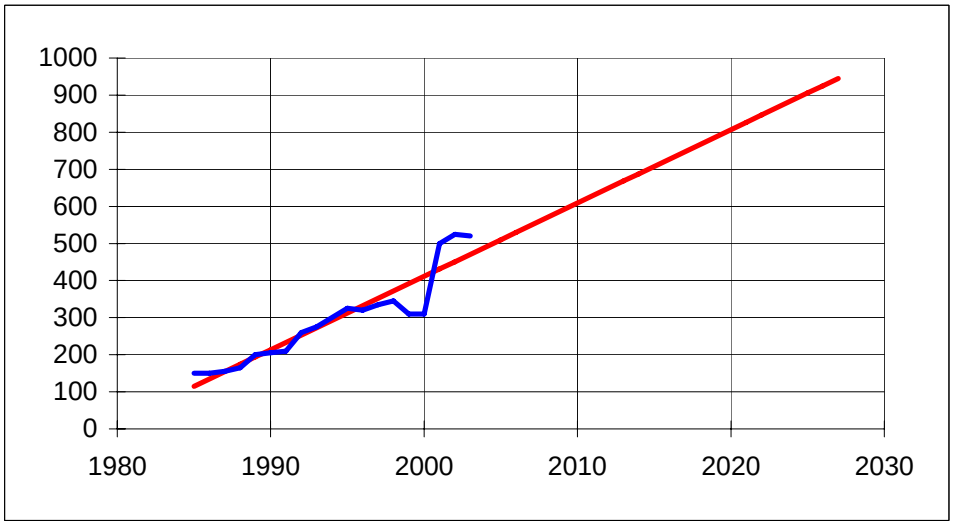
Limits *West of Milford*

Year	AADT	Forecast
1985	150	115
1986	150	134
1987	155	154
1988	165	174
1989	200	194
1990	205	214
1991	210	233
1992	260	253
1993	275	273
1994	300	293
1995	325	312
1996	320	332
1997	335	352
1998	345	372
1999	310	391
2000	310	411
2001	500	431
2002	525	451
2003	520	471
2004		490
2005		510
2006		530
2007		550
2008		569
2009		589
2010		609
2011		629
2012		649
2013		668
2014		688
2015		708
2016		728
2017		747
2018		767
2019		787
2020		807
2021		826
2022		846
2023		866
2024		886
2025		906
2026		925
2027		945

17% Trucks

Projection based on 1985 to 2003 data

4.6% growth rate → 20 vehicles/year



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Route *SR 257*

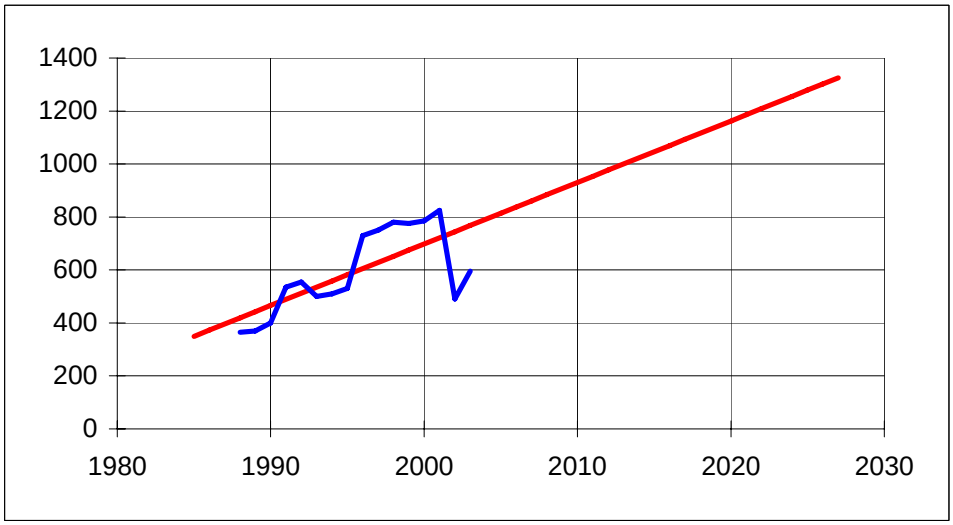
Limits *North of SR 21*

Year	AADT	Forecast
1985		350
1986		373
1987		396
1988	365	419
1989	370	442
1990	400	466
1991	535	489
1992	555	512
1993	500	535
1994	510	559
1995	530	582
1996	730	605
1997	750	628
1998	780	652
1999	775	675
2000	785	698
2001	825	721
2002	490	744
2003	595	768
2004		791
2005		814
2006		837
2007		861
2008		884
2009		907
2010		930
2011		953
2012		977
2013		1000
2014		1023
2015		1046
2016		1070
2017		1093
2018		1116
2019		1139
2020		1163
2021		1186
2022		1209
2023		1232
2024		1255
2025		1279
2026		1302
2027		1325

7% Trucks

Projection based on 1988 to 2003 data

3.2% growth rate → 23 vehicles/year



Notes

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4. Planning Issues and Guidelines

Provided below is a discussion of various issues with a focus on elements that promote a safe and efficient transportation system in the future.

4.1 Guidelines and Policies

These guidelines address certain areas of concern that are applicable to Milford City's Transportation Master Plan.

4.1.1 Access Management

This section will define and describe some of the aspects of Access Management for roadways and why it is so important. Access Management can make many of the roads in a system work better and operate more safely if properly implemented. There are many benefits to properly implemented access management. Some of the benefits follow:

- Reduction in traffic conflicts and accidents
- Reduced traffic congestion
- Preservation of traffic capacity and level of service
- Improved economic benefits businesses and service agencies
- Potential reductions in air pollution from vehicle exhausts

4.1.1.1 Definition

Access management is the process of comprehensive application of traffic engineering techniques in a manner that seeks to optimize highway system performance in terms of safety, capacity, and speed. Access Management is one tool of many that makes a traffic system work better with what is available.

4.1.1.2 Access Management Techniques

There are many techniques that can be used in access management. The most common techniques are signal spacing, street spacing, access spacing, and interchange to crossroad access spacing. There are various distances for each spacing, dependant upon the roadway type being accessed and the accessing roadway. UDOT has developed an access management program and more information can be gathered from the UDOT website and from the Access Management Program Coordinator.

4.1.1.3 Where to Use Access Management

Access Management can be used on any roadway. In some cases, such as State Highways, access management is a requirement. Access management can be used as

an inexpensive way to improve performance on a major roadway that is increasing in volume. Access management should be used on new roadways and roadways that are to be improved so as to prolong the usefulness of the roadway.

4.1.2 Context Sensitive Solutions

Context Sensitive Solutions (CSS) addresses the need, purpose, safety and service of a transportation project, as well as the protection of scenic, aesthetic, historic, environmental and other community values. CSS is an approach to transportation solutions that find, recognize and incorporate issues/factors that are part of the larger context such as the physical, social, economic, political and cultural impacts. When this approach is used in a project the project become better for all of the entities involved.

4.1.3 Recommended Roadway Cross Sections

Cross sections are the combination of the individual design elements that constitute the design of the roadway. Cross section elements include the pavement surface for driving and parking lanes, curb and gutter, sidewalks and additional buffer/landscape areas. Right-of-way is the total land area needed to provide for the cross section elements. Suggested types of cross-sections can be found in figure 4-1.

The design of the individual roadway elements depends on the intended use of the facility. Roads with higher design volumes and speeds need more travel lanes and wider right-of-way than low volume, low speed roads. The high use roadway type should include wider shoulders and medians, separate turn lanes, dedicated bicycle lanes, elimination of on street parking, and control of driveway access. For most roadways, an additional buffer area is provided beyond the curb line. This buffer area accommodates the sidewalk area, landscaping, and local utilities. Locating the utilities outside the traveled way minimizes traffic disruption in utility repairs or changes in service are needed.

Federal Highway standard widths apply on the all roads that are part of the state highway system. Also, all federally funded roadways in Milford City and Beaver County must adhere to the same standards for widths and design.

4.2 Bicycles and Pedestrians

4.2.1 Bicycles/Trails

Bicycles are allowed on all roadways, except where legally prohibited, and as such should be a consideration on all roads that are being designed and constructed, and as roadway improvements are taking place. To increase the level of interest in bicycling in the Milford area, the City should consider requiring developers to include separate bicycle/pedestrian pathways in all new developments. Opportunities to include bike lanes and increased shoulder width in conjunction with a roadway project should be taken whenever technically, environmentally, and financially feasible.

As referenced in Chapter 2 of this Plan, the popular use of ATV's has created some problems for the City. These problem areas should be studied and a determination made to curtail some of the out-of-bound riders, possibly by imposing restrictions and enforcement. Input from the community will be essential in establishing a satisfactory resolution.

As growth occurs in the area the City may want to pursue development of a trails plan, which would provide alternative and recreational modes of travel to enhance the quality of life for those in the community. It is important to note that regardless of the trails system's function, as the bike/trail facilities are planned, designed and constructed, the City should review the connectivity of the system. With input from the community, a review of the connectivity of the trails should play an integral role in the decision making process for potential projects. In order to enhance the quality of life for those in the community, the trails should be accessible to all users and incorporate ADA requirements.

The trails, when constructed, may have slight variances in application type due to possible differences in the terrain at a specific trail location or differing user needs. However, regardless of the design type, the applicable design standards found in the latest version of the AASHTO Guide for the Development of Bicycle Facilities should be followed, as well as the Manual on Uniform Traffic Control Devices (MUTCD) guidelines for appropriate signage of the trails system.

4.2.2 Pedestrians

Every effort should be made to accommodate pedestrians throughout Milford City. An opportunity to include accessible sidewalks, while adhering to ADA requirements, during construction of other projects is encouraged. For the safety and convenience of pedestrian traffic, sidewalk placement should be free from debris and obstructions or impediments such as utility poles, trees, bushes, etc. The City should research and inventory their sidewalk system, and document locations where there may be gaps or safety concerns. Effort should then be made to construct and complete the sidewalks where gaps or problems occur. Milford City should continue to require developers to include sidewalk improvements in their projects plans, whether commercial or residential. To allow for pedestrian travel, the interconnectedness of the City's sidewalk system should be considered as all development takes place.

Sidewalks in residential areas should be at least 5-feet wide whenever adequate right-of-way can be secured. This will provide sufficient room and a level of comfort to persons walking in pairs or passing and will specifically allow for persons with strollers or in wheelchairs to pass. On major roadways, sidewalks at least 6-feet wide and with a 6 to 10-foot park strip are desirable. In pedestrian-focused areas, such as schools, parks, sports venues or theaters, and in hotel and market districts, even wider sidewalks are recommended to accommodate and encourage a higher level of pedestrian activity, especially where tourist use would be expected. To ensure consistency of sidewalks throughout the area, UDOT's approved standard for sidewalks should be followed, as well as the 2004 AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities.

There may be opportunity for the City to make improvements to their sidewalk system through the Utah Department of Transportation's Safe Sidewalk Program, available through the Traffic and Safety Division. The City should contact UDOT's Region Four office for application requirements.

The City should be aware of, and coordinate with, the area schools that are tasked with developing a routing plan to provide a safe route to school. The routing plan is to be reviewed and updated annually. Information regarding the Safe Routes to School program is available by contacting the Utah Department of Transportation's Traffic and Safety Division.

4.3 Enhancements Program

In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) created the Transportation Enhancement program. The program has since been reauthorized in subsequent bills (i.e. TEA-21). The Transportation Enhancement program provides opportunities to use federal dollars to enhance the cultural and environmental value of the transportation system. These transportation enhancements are defined as follows by TEA-21:

> The term 'transportation enhancement activities' means, with respect to any project or the area to be served by the project, any of the following activities if such activity relates to surface transportation: provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists, acquisition of scenic easements and scenic or historic sites, scenic of historic highway programs (including the provision of tourist and welcome center facilities), landscaping and other scenic beautification, historic preservation, rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals), preservation of abandoned railway corridors (including the conservation and use thereof for pedestrian or bicycle trails), control and removal of outdoor advertising, archeological planning and research, environmental mitigation to address water pollution due to highway runoff or reduce vehicle caused wildlife

mortality while maintaining habitat connectivity, and establishment of transportation museums.

The Utah Transportation Commission, with the help of an advisory committee, decides which projects will be programmed and placed on the Statewide Transportation Improvement Program (STIP). Applications are accepted in an annual cycle for the limited funds available to UDOT for such projects. Information and Applications for the current cycle can be found on UDOT's homepage @ www.udot.utah.gov, tab on "Doing Business" select "Planning and Programming", here you will find a sub-topic entitled "Transportation Enhancement Program". Applications must be received by the UDOT Program Development Office, on or before the specified date to be considered. Projects will compete on a statewide basis.

4.4 Transportation Corridor Preservation

Transportation Corridor Preservation will be introduced as a method of helping Milford's Transportation Master Plan. This section will define what Corridor Preservation is and ways to use it to help the Transportation Master Plan succeed for the City.

4.4.1 Definition

Transportation Corridor Preservation is the reserving of land for use in building roadways that will function now and can be expanded at a later date. It is a planning tool that will reduce future hardships on the public and the city. The land along the corridor is protected for building the roadway and maintaining the right-of-way for future expansion by a variety of methods, some of which will be discussed here.

4.4.2 Corridor Preservation Techniques

There are three main ways that a transportation corridor can be preserved. The three ways are acquisition, police powers, and voluntary agreements and government inducements. Under each of these are many sub-categories. The main methods will be discussed here, with a listing of some of the sub-categories.

4.4.2.1 Acquisition

One way to preserve a transportation corridor is to acquire the property outright. The property acquired can be developed or undeveloped. When the city is able to acquire undeveloped property, the city has the ability to build without greatly impacting the public. On the other hand, acquiring developed land can be very expensive and can create a negative image for the City. Acquisition of land should be the last resort in any of the cases for Transportation Corridor Preservation. The following is a list of some ways that land can be acquired.

- Development Easements
- Public Land Exchanges
- Private Land Trusts
- Advance Purchase and Eminent Domain

- Hardship Acquisition
- Purchase Options

4.4.2.2 Exercise of Police Powers

Police powers are those ordinances that are enacted by a municipality in order to control some of the aspects of the community. There are ordinances that can be helpful in preserving corridors for the Transportation Master Plan. Many of the ordinances that can be used for corridor preservation are for future developments in the community. These can be controversial, but can be initially less intrusive.

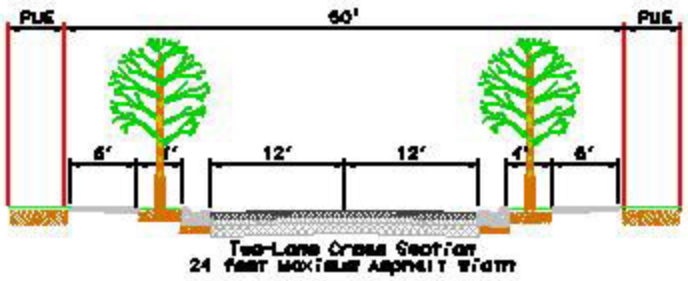
- Impact Fees and Exactions
- Setback Ordinances
- Official Maps or Maps of Reservation
- Adequate Public Facilities and Concurrency Requirements

4.4.2.3 Voluntary Agreements and Governmental Inducements

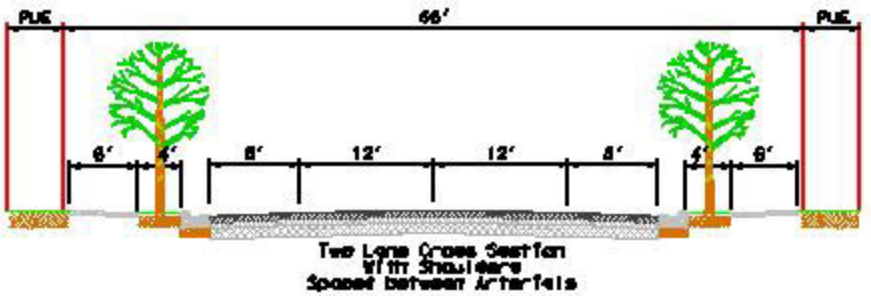
Voluntary agreements and governmental inducements rely on the good will of both the developers and the municipality. Many times it is a give and take situation where both parties could benefit in the end. The developer will likely have a better-developed area and the municipality will be able to preserve the corridor for transportation in and around the development. Listed below are some of the voluntary agreements and governmental inducements that can be used in order to preserve transportation corridors in the city limits.

- Voluntary Platting
- Transfer of Development Rights
- Tax Abatement
- Agricultural Zoning

Each of these methods has its place, but there is an order that any government should try to use. Voluntary agreements and government inducements should be used, if possible, before any police powers are used. Police powers should be tried before acquisition is sought. UDOT has developed a toolkit to aid in corridor preservation techniques. This toolkit contains references to Utah code and examples of how the techniques have been used in the past.

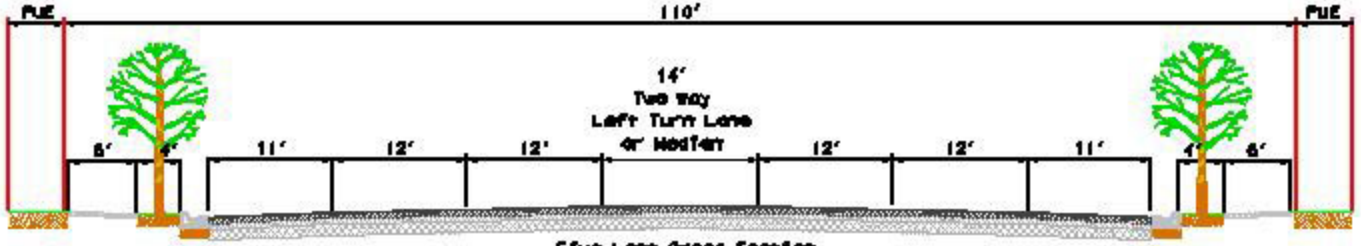


Two-Lane Cross Section
24 feet Maximum Asphalt Width



Two Lane Cross Section
With Shoulders
Spaced between Arterials

Three Lane Cross Section
With Shoulder
Spaced between Arterials



Five Lane Cross Section
With Sholders
Minimum spacing approximately ¼ mile

Notes:

1. Sidewalk Dimension varies from 4' to 6' (See UDOT Std Dwg 08 II Note 3)
2. Public Utility Easement (PUE) dimension varies from 2.5' to 12' Typical
3. Shoulder Dimensions:
   on 80' ROW - varies from 8' to 12'
   on 110' ROW - varies from 10' to 12'
   See AASHTO A Policy on Geometric Design of Highways and Streets

10 5 0 10 20 30

Scale in Feet

Suggested Typical Cross Section

Revised: September 16, 2004

5. Transportation Improvement Projects

5.1 Current Statewide Transportation Improvement Program (2005-2009 STIP)

At the present time there is one project under consideration in the Milford City area. Currently in the STIP.

- Railroad crossing in Milford at SR-21 and Union Pacific rail yard.(Scheduled for Construction 2005)

Also, this project is currently listed on the State of Utah's Long Range Plan, Utah Transportation 2030:

- Rail Road crossing improvement on SR-21 near 850 South to Reference Post 47.
- Bridge Project on SR- 21 from Reference Post 53 to 200 West.
- Milford Rail-Yard expansion.

5.2 Recommended Projects

The following list identifies the six projects that have been identified as having the highest priority to the Milford City Transportation Advisory Committee. These needs were identified through a series of meetings where the TAC identified the needs and set priorities for projects.

- Develop a City Master Drainage Plan.
- Correct the North West Corner of Center Street and Tiger Blvd for Sight Distance concern.

- New Curb and Gutter replacement Citywide.
- Develop a Community wide ATV Trails Plan.
- Widen Runway and Lengthen to 10,000 Feet.
- Widen the Intersection at SR-21 & SR-257 to incorporate Turn Lanes.

Additionally, many concerns and issues were identified which are found on the attached list.

Milford City Transportation Issues List and Cost Estimates

Route or Street Name	General Location Description	Description of Issue	Potential Project or Action	Planning Level Cost Estimate
SR-21	Intersection @ SR-21 & SR-257	Widen Intersection to incorporate Turn Lanes	Turn Lane Project	$1,000,000
700 East	700 West from Center Street to 600 North	Pave Existing Gravel Road	Reconstruction	$350,000
Local	Industrial Park Road	Roadway and Railroad Crossing Improvements	Reconstruction	$250,000
900 South	900 South from 200 West to Main Street	New Roadway Construction	New Road	$175,000
Local	Citywide	Develop City Master Drainage Plan	Drainage	$100,000
600 North	600 North and 300 West	Drainage Improvements next to the Recreation Complex	Drainage	$50,000
Local	Airport	Lengthen and Widen Runway to 10,000 feet	New Constrution	$5,000,000
Local	Citywide	Develop Community Ped/BikeTrail Plan	Trail Project	$25,000
Local	At entrances to the city	Build City Gateway Features	Enhancement	$250,000
Local	New Railroad Overpass	Landscape and Beautification	Other Study	$125,000
Local	Old City Water Tower	Beautification Enhancement Project	Enhancement	$100,000
Local	Citywide	Signage for ATV Routes	Trail Project	$25,000
Local	Citywide	Economic Development Potential study for Area north of Milford	Other Study	$50,000
SR-21	Center Street in front of High School	School Zone Saftey Review	Crosswalk	$5,000
700 West	700 West near Elementary School	School Zone Saftey Review	Crosswalk	$5,000
SR-21	Center Street and Tiger Blvd.	Sight Distance concern @ NW Corner	Spot Improvement	$15,000
Local	Citywide	Develop ATV Trails Plan	Trail Project	$25,000
			TOTAL	7,550,000

Local	Citywide	Asphalt Reconstuction (Cost Per Block)	Reconstruction	$100,000
Local	Citywide	New Curb and Gutter (Cost Per Block)	Drainage	$60,000
SR-257	Either Eastside or Westside of Town	New Roadway Construction to add "by-pass" route (Cost per Mile)	New Road	$1,500,000

Note 1 - Railroad overpass project (Main Street) already in STIP for year 2005
Note 2 - SR-21 & SR-257 Rotomill project in UDOT maintenance program for this coming summer.

4/11/2006

5.3 Revenue Summary

5.3.1 Federal and State Participation

Federal and State participation is important for the success of implementing these projects. UDOT needs to see the Transportation Master Plan so that they understand what the City wants to do with its transportation system. UDOT can then weigh the priorities of the city against the rest of the state. It is important for Milford City to promote projects that can be placed on UDOT's five-year Statewide Transportation Improvement Program (STIP) as soon as possible. The process for placing projects into the STIP and funding of these projects can be found at UDOT's homepage @ www.udot.utah.gov, tab on "Doing Business" select the tab for " Planning and Programming" here there is a subtopic entitled "Statewide Transportation Improvement Program (STIP)" that describes this program in detail. Additionally coordination with UDOT's Region Director and Planning Engineer will be practical.

5.3.2 City Participation

The City will fund the local Milford City projects. The local match component and partnering opportunities vary by the funding source.

5.4 Other Potential Funding

Previous sections of this chapter show significant shortfalls projected for the short-range and long-range programs. The following options may be available to help offset all or part of the anticipated shortfalls:

- Increased transportation impact fees.
- Increased general fund allocation to transportation projects.
- General obligation bonds repaid with property tax levies.
- Increased participation by developers, including cooperative programs and incentives.
- Special improvement districts (SIDs), whereby adjacent property owners are assessed portions of the project cost.
- Sales or other tax increase.
- State funding for improvements on the county roadway system.
- Increased gas tax, which would have to be approved by the State Legislature.
- Federal-aid available under one of the programs provided in the federal transportation bill (TEA-21 is the current bill; SAFETEA will likely be passed in late 2005).

Increased general fund allocation means that General Funds must be diverted from other governmental services and/or programs. General obligation bonds provide initial capital for transportation improvement projects but add to the debt service of the governmental agency. One way to avoid increased taxes needed to retire the debt is to sell bonds repaid with a portion of the municipalities' State Class monies for a certain number of years.

Participation by private developers provides a promising funding mechanism for new projects. Developers can contribute to transportation projects by constructing on-site

improvements along their site frontage and by paying development fees. Municipalities commonly require developers to dedicate right-of-way and widen streets along the site frontage. A negative side of the on-site improvements is that the streets are improved in pieces. If there are not several developers adjacent to one another at the same time, a continuous improved road is not provided. One way to overcome this problem is for the jurisdiction to construct the street and charge the developers their share when they develop their property.

Another way developers can participate is through development fees. The fees would be based on the additional improvements required to accommodate the new development and would be proportioned among each development. The expenditure of additional funds provided by the fees would be subject to the City's spending limit. However, development fees are often a controversial issue and may or may not be an appropriate method of funding projects.